

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Original) A method of radar processing comprising:
  - 2 radiating a first signal beam from an antenna of a first radar in the direction of a target;
  - 3 radiating a second signal beam from an antenna of a second radar in the direction of the
  - 4 target;
  - 5 receiving echo signals from the first signal beam at the first and second radars;
  - 6 receiving echo signals from the second signal beam at the first and second radars;
  - 7 processing the echo signals received at the first radar to produce first radar processed
  - 8 echo signals;
  - 9 processing the echo signals received at the second radar to produce second radar
  - 10 processed echo signals; and
  - 11 combining the first and second radar processed echo signal values to form an aggregate
  - 12 value.
- 1 2. (Original) The method of claim 1 wherein the first and second signal beams have respective  
2 first and second carrier frequencies which are different.
- 1 3. (Original) The method of claim 2 wherein combining comprises combining incoherently all  
2 of the first and second radar processed echo signals.
- 1 4. (Original) The method of claim 2 wherein combining comprises:
  - 2 combining coherently those of the first and second radar processed echo signals that have
  - 3 the first carrier frequency;
  - 4 combining coherently those of the first and second radar processed echo signals that have the
  - 5 second carrier frequency; and
  - 6 combining incoherently the results of the coherent combination for the first and second carrier
  - 7 frequencies.

- 1 5. (Original) The method of claim 1 wherein the first and second signal beams have the same  
2 carrier frequency.
- 1 6. (Original) The method of claim 5 wherein combining comprises:  
2 combining coherently those of the first and second radar processed echo signals from the  
3 first signal beam to produce a first result;  
4 combining coherently those of the first and second radar processed echo signals from the  
5 second signal beam to produce a second result; and  
6 combining coherently the first and second results.
- 1 7. (Original) The method of claim 5 wherein combining comprises:  
2 combining coherently those of the first and second radar processed echo signals from the  
3 first signal beam to produce a first result;  
4 combining coherently those of the first and second radar processed echo signals from the  
5 second signal beam to produce a second result; and  
6 combining incoherently the first and second results.
- 1 8. (Original) The method of claim 5 wherein combining comprises:  
2 combining incoherently those of the first and second radar processed echo signals from  
3 the first signal beam to produce a first result;  
4 combining incoherently those of the first and second radar processed echo signals from  
5 the second signal beam to produce a second result; and  
6 combining incoherently the first and second results.
- 1 9. (Original) The method of claim 8 wherein the first and second signal beams are transmitted  
2 sequentially in time.
- 1 10. (Original) The method of claim 1 wherein the antennas are synchronized rotating antennas.

1 11. (Original) The method of claim 1 wherein the antennas comprise non-rotating phased  
2 arrays.

1 12. (Currently Amended) A method of processing ~~by a radar~~ signals comprising:  
2 radiating a first signal beam by a first radar with the first signal beam being radiated in  
3 the direction of a target;  
4 receiving, in the first radar, echo signals from the first signal beam;  
5 receiving, in the first radar, echo signals from a second signal beam radiated by a second  
6 different radar radiating the second signal beam in the direction of the target, the first radar and  
7 the second radar being spaced a predetermined distance apart; and  
8 processing, in the first radar, the echo signals from the first and second signal beams to  
9 provide first-radar processed echo signals.

1 13. (Currently Amended) The method of claim ~~12~~ further comprising:  
2 receiving, in the second radar, echo signals from the first signal beam;  
3 receiving, in the second radar, echo signals from the second signal beam;  
4 processing, in the second radar, the echo signals from the first and second signal beams to  
5 provide second-radar processed echo signals; and  
6 combining the second-radar processed echo signals with the first-radar echo signals from  
7 ~~the first and second signal beams that have been received by the second radar and processed, to~~  
8 form an aggregate value.

1 14. (Currently Amended) A radar comprising:  
2 a transmitter which provide signals to and antenna to radiate a first signal in the direction  
3 of a target;  
4 a receiver to receive echo signals from the first signal beam and echo signals from a  
5 second signal beam radiated ~~by a second antenna of a second radar~~ in the direction of the target  
6 by a second antenna of a second radar; and  
7 circuitry to process the echo signals from the first and second signal beams received by  
8 the receiver, and to combine the processed echo signals with echo signals from the first and

9 second signal beams that have been received by a receiver of the second radar and processed, to  
10 form an aggregate value.

1 15. (Original) The radar of claim 14 wherein the circuitry comprises a digital signal processor.

1 16. (Original) The radar of claim 14 wherein the circuitry comprises analog circuitry.

1 17. (Original) The radar of claim 14 further including circuitry to synchronize rotation of the  
2 antenna with the second antenna of the second radar.

1 18. (Original) The radar of claim 14 wherein the first and second signal beams have respective  
2 first and second carrier frequencies which are different.

1 19. (Original) The radar of claim 18 wherein the circuitry combines the processed echo signals  
2 using incoherent integration.

1 20. (Original) The radar of claim 18 wherein the circuitry combines the processed echo signals  
2 using both coherent and incoherent integration.

1 21. (Original) The radar of claim 14 wherein the first and second signal beams have respective  
2 first and second carrier frequencies which are the same.

1 22. (Original) The radar of claim 21 where the circuitry combines the processed echo signals  
2 using coherent integration.

1 23. (Original) The radar of claim 21 wherein the circuitry combines the processed echo signals  
2 using incoherent integration.

1 24. (Original) The radar of claim 21 wherein the circuitry combines the processed echo signals  
2 using both coherent and incoherent integration.